Mackenzie (J. N.)

ON REMOVAL OF THE INFERIOR TURBINATED BODY OF THE OBSTRUCTED SIDE AS A SUBSTITUTE FOR OPERATION ON THE DEFLECTED NASAL SEPTUM IN CERTAIN CASES.

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THE management of malpositions of the nasal septum has, until very recent times, been classed among the unsatisfactory and almost hopeless procedures of surgery. Especially is this true in regard to irregularities in the conformation of the bony framework of that structure, and the general advice of the more cautious is to surrender to the powers of nature that which is difficult and unpromising to man. This universal repugnance to surgical interference with the bony septum has been partially overcome in recent years by the introduction of the dental drill and engine, an apparatus which has, doubtless, given excellent results, but which is at the same time open to a number of obvious disadvantages. Certain cases of deep-seated deflection of the bony septum, for example, occasionally arise in which the patient will not submit to the operation, or the surgeon, from the peculiar nature of the malposition, hesitates to perform it. Under such circumstances, I believe that much good may be accomplished by the method indicated in the title of this communication—an operation which I proposed in 1882 at the annual meeting of the Virginia State Society, and carried out in the spring of the following year,* upon a patient whose history may be briefly stated as follows:

W. R., æt. 26, blacksmith, came to my clinic suffering from obstruction of the nostril, of six years' duration. The bony septum was so bent as to preclude respiration through the left nostril, the deviation consisting in an irregular ridge along the inferior border of the vomer, which, with the opposite turbinated structure produced complete closure of the corresponding nasal fossa. This had led, among other complications, to chronic hypertrophic enlargement of the turbinated structures of both nostrils, catarrhal pharyngo-laryngitis, and otitis media. Behind the deflected portion of the septum, on the left side, the posterior end of the left inferior turbinated body could be seen in the rhinoscopic image, as a small whitish hypertrophic mass. This was encircled by the loop of the wire snare, which was forced with difficulty through the nostril, and the wire slowly screwed home until the resistance was very great and it was certain that slipping of the snare was impossible. The mucous membrane with its underlying cavernous body was then stripped or torn away from behind, forwards, the wound reaching to the anterior end of the turbinated structure.

At the time of the operation there was scarcely any hemorrhage and the patient declared that the pain was trifling in amount. During the afternoon slight secondary hemorrhage occurred, which was easily checked by the patient himself. Relief was instantaneous, and in the course of a week patency of the nostril secured through contraction of the divided tissues.

A few weeks after I had performed the operation in the preceding case, a second came under my professional care, with the following history:

L. S., æt. about 30, jeweller; has an indistinct recollection that during his boy-

* See a paper by the writer, entitled "Deflection of the Nasal Septum and its Treatment," in *Trans. Virginia Society*, 1883. (Contains detailed account of the subject.)

hood he received some injury to the nose which altered its external shape, and subsequently interfered with his respiration. No surgical operation was performed for the relief of the nasal obstruction. Since then has suffered from a chronic catarrhal inflammation of the nasal passages and throat, with gradual impairment of respiration, for the relief of which he has tried all manner of measures at the hands of both regular practitioners and quacks. The left nostril has been obstructed since the accident, but the right has only become impassable to the air current for the past two years. For the past eighteen months, has not been able to close his mouth, through which, practically, all respiration takes place. He describes his sufferings in consequence of this condition as agonizing, and, indeed, his general health and nervous system have become so much affected that he has been driven to the verge of suicide. Discouraged and desperate concerning his condition, he had come to me, as he said, to have his nose "bored through" and his septum replaced, his physician having assured him that the latter was turned to one side and prevented the passage of air through the nostril.

The external nose presented an irregular flattening of the dorsum from above, downward, and its tip was deflected slightly to the right, the whole deformity being evidently due to the accident which he had sustained years before. The nasal and post-nasal passages being thoroughly cleansed of the abundant secretion of inspissated mucus, a posterior rhinoscopic examination was made, which disclosed the following condition of affairs:

The posterior border of the septum was straight, but just anterior to it, and within the left nasal fossa, the vomer was bent inwards, so that it lay in immediate contact with the swollen, reddened inferior turbinated body of that side. This bulging portion of the vomer had, in addition to its malposition, apparently undergone abnormal development, for the corresponding concavity of the bone in the opposite nostril was inconsiderable, and was filled by the enormously hypertrophied posterior end of the right inferior turbinated body. The middle turbinated bodies of both sides were so enlarged that the middle meatuses were almost completely impervious. Upon examining the nasal fossæ from in front, the deflected portion of the vomer was observed to extend nearly the whole length of the bone. At the junction of the latter and the cartilaginous septum was an irregular ridge which was probably the result of a partial dislocation at the junction of bone and cartilage, and which together with the bulging vomer produced complete obstruction of the deeper portion of the nostril. The anterior portion of the cartilage was turned to the right, and also slightly deflected from above, downward, but not to an extent sufficient to interfere with respiration through either nostril. The anterior ends of the right, middle and inferior turbinated bodies were considerably swollen, but obstruction was only complete in the posterior third of the fossa.

Looking upon the case as an unpromising one, as far as any operation on the septum was concerned, I determined to free the right nostril, in the hope that, with the restoration of the air current through one side, his sufferings would be so mitigated as to justify non-interference with the deflected and dislocated septum. The right inferior turbinated hypertrophy was accordingly removed with the wire snare, the operation being complemented by the knife of the galvano-cautery apparatus. Two weeks were then allowed to elapse, in order to judge of the effect of the operation, but at the expiration of that time he returned to say, that, although respiration had been partially restored, he felt very little relief from what had been done, and insisted upon my undertaking some surgical procedure on the posterior part of the septum. The alternatives

then were presented of either grinding down the bone with the surgical engine, or the complete removal of the inferior turbinated body. I chose the latter. As the irregularity of the nasal fossa and its complete obstruction forbade the use of the snare, the galvano-cautery was resorted to. By this means the whole inferior turbinated body was removed, the tissues being destroyed from before, backwards. In order to avoid disagreeable complications, the operations, about five in all, were performed at intervals of two weeks, the nostrils being kept scrupulously cleansed, and all sloughing tissue removed. When the slough from the last operation had separated and cicatrization was complete, he breathed with perfect freedom through both nostrils, and it was accordingly deemed best not to trouble the inferior turbinated bone. The result was extremely satisfactory and the patient expressed himself thoroughly pleased with his new and improved condition.

The after-treatment consisted in the use of ordinary cleansing and curative measures for the relief of the chronic inflammatory condition of the naso-pharyngeal cavities, and in two months time his trouble had ceased to give him any concern. Several months ago, he told me that since then he has enjoyed perfect health and was loud in his praises of the experimental work which had been undertaken upon his nasal passages.

As the rational treatment of deflection of the nasal septum varies with the nature and situation of the malposition, the above procedure is only applicable in certain exceptional cases in which other methods are contraïndicated, or can be carried out only with difficulty. While it is not, therefore, the purpose of the present article to overestimate its importance in the management of deflection of the septum, the success which has followed its performance in the cases related above, is sufficient to encourage the belief that it possesses an unquestionable value in the treatment of certain difficult and hitherto unmanageable conditions of the deeper portions of the bony septum.

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